for X-Ray Generators and Automatic Exposure Control Devices, published by the American Institute of Physics for AAPM, January 1985, into §§ 37.42(h) and 37.44(g).

(3) AAPM Report No. 31, Standardized Methods for Measuring Diagnostic X-Ray Exposures, Report of Task Group 8, Diagnostic X-Ray Imaging Committee, published by the American Institute of Physics, July 1990, into § 37.44(g).

(4) AAPM Report No. 74, Quality Control in Diagnostic Radiology, Report of Task Group 12, Diagnostic X-Ray Imaging Committee, published by Medical Physics Publishing for AAPM, July 2002, into §§ 37.42(h), 37.43(f), and 37.44(g).

(5) AAPM Report No. 93, Acceptance Testing and Quality Control of Photostimulable Storage Phosphor Imaging Systems, October 2006, into §§ 37.42(i) and 37.44(g).

(6) AAPM Report No. 116, An Exposure Indicator for Digital Radiography, Report of AAPM Task Group 116, published by AAPM, July 2009, into § 37.44(g).

(c) American College of Radiology, 1891 Preston White Dr., Reston, VA 20191, *http://www.acr.org*:

(1) ACR Practice Guideline for Diagnostic Reference Levels in Medical X-Ray Imaging, Revised 2008 (Resolution 3), into §§ 37.42(i) and 37.44(g).

(2) [Reserved]

(d) International Labour Office, CH–1211 Geneva 22, Switzerland, *http://www.ilo.org/publns*:

(1) Guidelines for the Use of the ILO International Classification of Radiographs of Pneumoconioses, Revised Edition 2011, into §§ 37.50(a), 37.50(c), and 37.51(b).

(2) [Reserved]

(e) National Council on Radiation Protection and Measurements, NCRP Publications, 7910 Woodmont Avenue, Suite 400, Bethesda, MD 20814–3095, Telephone (800) 229–2652, *http://www.ncrppublications.org*:

(1) NCRP Report No. 102, Medical X-ray, Electron Beam, and Gamma-Ray Protection for Energies Up to 50 MeV (Equipment Design, Performance, and Use), issued June 30, 1989, into § 37.45.

(2) NCRP Report No. 105, Radiation Protection for Medical and Allied Health Personnel, issued October 30, 1989, into § 37.45.

(3) NCRP Report No. 147, Structural Shielding Design for Medical X-Ray Imaging Facilities, revised March 18, 2005, into § 37.45.

(f) National Electrical Manufacturers Association, 1300 N. 17th Street, Rosslyn, VA 22209, *http://medical.nema.org*:

(1) DICOM Standard PS 3.3–2011, Digital Imaging and Communications in Medicine (DICOM) standard, Part 3: Information Object Definitions, copyright 2011, into § 37.42(i).

(2) DICOM Standard PS3.4–2011, Digital Imaging and Communications in Medicine (DICOM) standard, Part 4: Service Class Specifications, copyright 2011, into § 37.42(i).

(3) DICOM Standard PS 3.10–2011, Digital Imaging and Communications in Medicine (DICOM) standard, Part 10: Media Storage and File Format for Media Interchange, copyright 2011, into § 37.42(i).

(4) DICOM Standard PS 3.11–2011, Digital Imaging and Communications in Medicine (DICOM) standard, Part 11: Media Storage Application Profiles, copyright 2011, into § 37.42(i).

(5) DICOM Standard PS 3.12–2011, Digital Imaging and Communications in Medicine (DICOM) standard, Part 12: Media Formats and Physical Media for Media Interchange, copyright 2011, into §§ 37.42(i) and 37.44(a).

(6) DICOM Standard PS 3.14–2011, Digital Imaging and Communications in Medicine (DICOM) standard, Part 14: Grayscale Standard Display Function, copyright 2011, into §§ 37.42(i)(5) and 37.51(d).

(7) DICOM Standard PS 3.16–2011, Digital Imaging and Communications in Medicine (DICOM) standard, Part 16: Content Mapping Resource, copyright 2011, into § 37.42(i).

[81 FR 73281, Oct. 24, 2016]

§ 37.20 Miner identification document.

As part of the examination, a Miner Identification Document (CDC/NIOSH (M)2.9) which includes an occupational history questionnaire must be completed for each miner at the facility where the examination is made (this

document is required for both radiographic and spirometry examinations conducted pursuant to this part).

[81 FR 73282, Oct. 24, 2016]

SPECIFICATIONS FOR PERFORMING CHEST RADIOGRAPHIC EXAMINATIONS

§ 37.40 General provisions.

(a) The chest radiographic examination must be given at a convenient time and place.

(b) The chest radiographic examination consists of the chest radiograph, a completed Chest Radiograph Classification Form (CDC/NIOSH 2.8), and a completed Miner Identification Document (CDC/NIOSH 2.9).

(c) A radiographic examination must be made in a facility approved in accordance with § 37.43 or § 37.44. Chest radiographs of miners under this section must be performed:

(1) By or under the supervision of a physician who makes chest radiographs in the normal course of practice and who has demonstrated ability to make chest radiographs of a quality to best ascertain the presence of pneumoconiosis; or

(2) By a radiologic technologist as defined in § 37.2.

[81 FR 73282, Oct. 24, 2016]

§ 37.41 Chest radiograph specifications—film.

(a) Miners must be disrobed from the waist up at the time the radiograph is given. The facility must provide a dressing area and for those miners who wish to use one, the facility will provide a clean gown. Facilities must be heated to a comfortable temperature.

(b) Every chest radiograph must be a single posteroanterior projection at full inspiration on a film being no less than 14 by 17 inches and no greater than 16 by 17 inches. The film and cassette must be capable of being positioned both vertically and horizontally so that the chest radiograph will include both apices and costophrenic angles. If a miner is too large to permit the above requirements, then the projection must include both apices with minimum loss of the costophrenic angle.

(c) Chest radiographs of miners under this section must be performed:

(1) By or under the supervision of a physician who makes chest radiographs in the normal course of practice and who has demonstrated ability to make chest radiographs of a quality to best ascertain the presence of pneumoconiosis; or

(2) By a radiologic technologist as defined in § 37.2.

(d) Radiographs must be made with a diagnostic X-ray machine with a maximum actual (not nominal) source (focal spot) of 2 mm, as measured in two orthogonal directions.

(e) Except as provided in this paragraph (e), radiographs must be made with units having generators that comply with the following:

(1) The generators of existing radiographic units acquired by the examining facility prior to July 27, 1973, must have a minimum rating of 200 mA at 100 kVp;

(2) Generators of units acquired subsequent to that date must have a minimum rating of 300 mA at 125 kVp.

(f) Radiographs made with battery-powered mobile or portable equipment must be made with units having a minimum rating of 100 mA at 110 kVp at 500 Hz, or of 200 mA at 110 kVp at 60 Hz.

(g) Capacitor discharge and field emission units may be used if the model of such units is approved by NIOSH for quality, performance, and safety. NIOSH will consider such units for approval when listed by a facility seeking approval under §§ 37.43 or 37.44.

(h) Radiographs must be given only with equipment having a beam-limiting device that does not cause large unexposed boundaries. The beam limiting device must provide rectangular collimation and must be of the type described in 21 CFR 1020.31(d), (e), (f), and (g). The use of such a device must be discernible from an examination of the radiograph.

(i) To ensure high quality chest radiographs:

(1) The maximum exposure time must not exceed 50 milliseconds except that with single phase units with a rating less than 300 mA at 125 kVp and subjects with chests over 28 cm posteroanterior, the exposure may be